

Appln. No. 10/708,558
Docket No. 144441/GEM-0101

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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1. (original) A magnet vent assembly for venting a cryogenic gas from a superconducting magnet of an MRI system, the assembly comprising:

a first burst disc, the first burst disc comprising a first inlet and a first outlet;

a second burst disc, the second burst disc comprising a second inlet coupled to the first inlet and a second outlet coupled to the first outlet; and

wherein the magnet vent assembly is configured to switchably direct a flow path of cryogenic gas through either of the following: the first burst disc and the second burst disc.

2. (original) The magnet vent assembly of claim 1, further comprising:

a magnet exhaust;

an exhaust vent;

a first valve in operable communication with the magnet exhaust, the first burst disc, and the second burst disc;

a second valve in operable communication with the exhaust vent, the first burst disc, and the second burst disc; and

wherein the first valve is configured to switchably direct a flow path of cryogenic gas from the magnet exhaust through either of the following: the first burst disc and the

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second burst disc; and wherein the second valve is configured to switchably direct a flow path of cryogenic gas to the exhaust vent from either of the following: the first burst disc and the second burst disc.

3. (original) The magnet vent assembly of claim 2, wherein the first valve and second valve are linked to prevent the blockage of a flow path of the cryogenic gas to the exhaust vent.

4. (original) The magnet vent assembly of claim 2, wherein the first valve and second valve are interlocked to prevent the blockage of a flow path of the cryogenic gas to the exhaust vent.

5. (original) The magnet vent assembly of claim 2, wherein the valves are 3-port valves.

6. (original) The magnet vent assembly of claim 2, wherein the valves are ball valves.

7. (original) The magnet vent assembly of claim 2, wherein the valves are vane valves

8. (original) The magnet vent assembly of claim 2, wherein the valves are able to withstand pressure of greater than about 2 atmospheres.

9. (original) The magnet vent assembly of claim 2, wherein the valves are able to withstand pressure of greater than about 1 atmospheres.

10. (original) The magnet vent assembly of claim 1, further comprising:

a magnet exhaust;

an exhaust vent;

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a first valve in operable communication with the magnet exhaust and the first inlet;

a second valve in operable communication with the exhaust vent and first outlet;

a third valve in operable communication with the magnet exhaust and the second inlet;

a fourth valve in operable communication with the exhaust vent and second outlet; and

wherein the first, second, third and fourth valves are configured to switchably direct a flow path of cryogenic gas from the magnet exhaust through either of the following: the first burst disc and the second burst disc.

11. (original) The magnet vent assembly of claim 10, wherein the first, second, third and fourth valves are linked to prevent the blockage of a flow path of the cryogenic gas to the exhaust vent.

12. (original) The magnet vent assembly of claim 10, wherein the first, second, third and fourth valves are interlocked to prevent the blockage of a flow path of the cryogenic gas to the exhaust vent.

13. (original) The magnet vent assembly of claim 10, wherein the valves are gate valves.

14. (original) The magnet vent assembly of claim 10, wherein the valves are able to withstand pressure of greater than about 2 atmospheres.

15. (original) The magnet vent assembly of claim 10, wherein the valves are able to withstand pressure of greater than about 1 atmospheres.

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16. (original) A magnet vent assembly for venting a cryogenic gas from a superconducting magnet of an MRI system, the assembly comprising:

a first burst disc, the first burst disc comprising a first inlet and a first outlet;

the first inlet comprising an inlet valve;

the first outlet comprising an outlet valve;

an inlet flange in operable communication with the first inlet;

an outlet flange in operable communication with the first outlet; and

wherein the magnet vent assembly is configured for a removable attachment by a service tool, the service tool comprising a second burst disc, and the inlet valve and outlet valve are configured to switchably direct a flow path of cryogenic gas through either of the following: the first burst disc and the second burst disc.

17. (original) The magnet vent assembly of claim 16, wherein the valves are 3-port valves.

18. (original) The magnet vent assembly of claim 16, wherein the valves are ball valves.

19. (original) The magnet vent assembly of claim 16, wherein the valves are vane valves

20. (original) The magnet vent assembly of claim 16, wherein the valves are able to withstand pressure of greater than about 2 atmospheres.

21. (original) The magnet vent assembly of claim 16, wherein the valves are able to withstand pressure of greater than about 1 atmospheres.

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22. (original) The magnet vent assembly of claim 16, wherein the inlet and outlet valves are linked to prevent the blockage of a flow path of the cryogenic gas to the exhaust vent.

23. (original) The magnet vent assembly of claim 16, wherein the inlet and outlet valves are interlocked to prevent the blockage of a flow path of the cryogenic gas to the exhaust vent.

24. (original) A service tool for a magnet vent assembly for venting a cryogenic gas from a superconducting magnet of an MRI system, the magnet vent assembly comprising a first burst disc, the service tool comprising:

an inlet end, configured to be removeably attachable to an inlet flange of a magnet vent assembly;

an outlet end, configured to be removeably attachable to an outlet flange of a magnet vent assembly;

a second burst disc in operable communication with the inlet end and outlet end;
and

wherein the service tool is configured to switchable direct a flow path of cryogenic gas through either of the following: the first burst disc and the second burst disc.

25. (currently amended) An MRI system comprising:

a cryostat;

a superconducting magnet located in the cryostat;

a first burst disc, the first burst disc comprising a first inlet and a first outlet, and the first inlet is in fluid communication with the cryostat;

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a second burst disc, the second burst disc comprising a second inlet coupled to the first inlet and a second outlet coupled to the first outlet, and the second inlet is in fluid communication with the cryostat;

a vent in fluid communication with the first outlet and the second outlet; [[and]]

~~wherein the MRI system is configured~~ means to switchably direct a flow path of cryogenic gas through either of the following: the first burst disc and the second burst disc; and

means to prevent blockage of the directed flow path to the vent in fluid communication with the coupled first and second outlets.